

MINOR SOURCE OPERATING PERMIT OFFICE OF AIR MANAGEMENT

**Micro-Precision Textron
525 Berne Street
Berne, Indiana 46711**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 001-11722-00003	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

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SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary small hard chromium electroplating manufacturing facility.

Authorized Individual: Micro-Precision Operations, Inc.
Source Address: 525 Berne Street, Berne, Indiana 46711
Mailing Address: 525 Berne Street, Berne, Indiana 46711
Phone Number: (219) 589-2136
SIC Code: 3471, 3569
County Location: Adams
County Status: Attainment for all criteria pollutants
Source Status: Minor Source Operating Permit
Minor Source, under PSD or Emission Offset Rules;
Minor Source, Section 112 of the Clean Air Act

A.2 Emissions units and Pollution Control Equipment Summary

This stationary source is approved to operate the following emissions units and pollution control devices:

- (1) One (1) Hard Chromium Electroplating Operation with a maximum cumulative rectifier capacity of 11,760,000 Ampere-hours (A-hr) consisting of:
 - (a) Two (2) hard chromium electroplating tanks, identified as HC-1 and HC-2, equipped with a Fumetrol® fume suppressant, and exhausting to one (1) stack, identified as 5;
- (2) One (1) sulfuric acid anodizing operation exhausting to stack 9;
- (3) One (1) electroless nickel plating operation exhausting to stack 9;
- (4) One (1) paint booth, identified as West paint booth, using dry filters with a 99% control efficiency for overspray control, and exhausting to stack 23;
- (5) One (1) paint booth, identified as North paint booth, using dry filters with a 99% control efficiency for overspray control, and exhausting to stack 25;
- (6) Welding operation; two (2) metal inert gas (MIG) stations, each with a maximum wire consumption rate of 6.3 pounds of wire per hour (lb wire/hr), one (1) tungsten inert gas (TIG) station, with a maximum wire consumption rate of 6.0 lb wire/hr, one (1) oxyacetylene flame cutter, with a maximum cutting rate of 6 inches per minute, and one (1) plasma cutter, with a maximum cutting rate of 10 inches per minute;
- (7) Three (3) pneumatic blasters identified as # 14, # 15 and # 16;

- (8) Miscellaneous combustion units consisting of various natural gas fired heaters and one (1) waste oil dryer; and
- (9) Degreasing operation.

SECTION B GENERAL CONSTRUCTION CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

B.1 Permit No Defense [IC 13]

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.4 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.5 Modification to Permit [326 IAC 2]

Notwithstanding the Section B condition entitled "Minor Source Operating Permit", all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

C.1 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]

- (a) The total source potential to emit of any criteria pollutant is less than 250 tons per year. Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 will not apply.
- (b) Any change or modification which may increase potential to emit to 250 tons per year from this source, shall cause this source to be considered a major source under PSD, 326 IAC 2-2 and 40 CFR 52.21, and shall require approval from IDEM, OAM prior to making the change.

C.2 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) after issuance of this permit, including the following information on each emissions unit:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAM, upon request and shall be subject to review and approval by IDEM, OAM. IDEM, OAM, may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.3 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

- (a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1.

- (c) The Permittee shall notify the OAM within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

C.4 Inspection and Entry [326 IAC 2-7-6(2)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAM, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;
- (c) Inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

C.5 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)] :

- (a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAM, Permits Branch, within thirty (30) days of the change.
- (b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).
- (c) IDEM, OAM, shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.6 Permit Revocation [326 IAC 2-1-9]

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.

- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.7 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

C.8 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

Testing Requirements

C.9 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing methods approved by IDEM, OAM.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

at least sixty (60) days before the intended test date for all chromium electroplating facilities and no later than thirty-five (35) days prior to the intended test date for all other facilities. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two (2) weeks prior to the test date.

Compliance Monitoring Requirements

C.10 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.11 Monitoring Methods [326 IAC 3]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

Record Keeping and Reporting Requirements

C.12 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.13 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM may excuse such failure providing adequate justification is

documented and such failures do not exceed five percent (5%) of the operating time in any quarter.

- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.14 General Record Keeping Requirements [326 IAC 2-6.1-2]

- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM, representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Records of required monitoring information shall include, where applicable:
 - (1) The date, place, and time of sampling or measurements;
 - (2) The dates analyses were performed;
 - (3) The company or entity performing the analyses;
 - (4) The analytic techniques or methods used;
 - (5) The results of such analyses; and
 - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
 - (1) Copies of all reports required by this permit;
 - (2) All original strip chart recordings for continuous monitoring instrumentation;
 - (3) All calibration and maintenance records;
 - (4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.
- (d) All record keeping requirements not already legally required shall be implemented when

operation begins.

C.15 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Quarterly. Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported. The Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.
- (d) Unless otherwise specified in this permit, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period. The report does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) All instances of deviations must be clearly identified in such reports. A reportable deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:
 - (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or
 - (2) A malfunction as described in 326 IAC 1-6-2; or
 - (3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.
 - (4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred or failure to monitor or record the required compliance monitoring is a deviation.
- (f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.
- (g) The first report shall cover the period commencing on the date of issuance of this permit

and ending on the last day of the reporting period.

C.16 Annual Notification [326 IAC 2-6.1-5(a)(5)]

- (a) Annual notification shall be submitted to the Office of Air Management stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.
- (c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Data Section, Office of Air Management
Indiana Department of Environmental Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015
- (d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

SECTION D.1

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description

- (1) One (1) Hard Chromium Electroplating Operation with a maximum cumulative rectifier capacity of 11,760,000 Ampere-hours (A-hr) consisting of:
 - (a) Two (2) hard chromium electroplating tanks, identified as HC-1 and HC-2, equipped with a Fumetrol® fume suppressant, and exhausting to one (1) stack, identified as 5;
- (2) One (1) sulfuric acid anodizing operation exhausting to stack 9; and
- (3) One (1) electroless nickel plating operation exhausting to stack 9.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-6.1-5(1)]

D.1.1 General Provisions Relating to HAPs [326 IAC 20-1-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 63, Subpart N. The permittee shall comply with the requirements of this condition on and after the compliance date for the tanks.

D.1.2 Chromium Electroplating and Anodizing NESHAP [326 IAC 20-8-1] [40 CFR Part 63, Subpart N]

The provisions of 40 CFR 63, Subpart N - National Emission Standards for Chromium Emissions From Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks, which are incorporated by reference as 326 IAC 20-8-1, apply to tanks HC-1 and HC-2. A copy of this rule is attached. The permittee shall comply with the requirements of this condition on and after the compliance date for the tanks.

D.1.3 Chromium Emissions Limitation [40 CFR 63.342(c)] [40 CFR 63.343(a)(1)&(2)]

- (a) The emission limitations in this condition apply only during tank operation, and also apply during periods of startup and shutdown as these are routine occurrences for tanks subject to 326 IAC 20-8-1. The emission limitations do not apply during periods of malfunction.
- (b) The hard chromium electroplating tanks, identified as HC-1 and HC-2 above, are considered a small, existing hard chromium electroplating operation. During tank operation, the Permittee shall control chromium emissions discharged to the atmosphere from the tanks by not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed 0.03 mg/dscm [1.3×10^{-5} gr/dscf].

D.1.4 Work Practice Standards [40 CFR 63.342(f)]

The following work practice standards apply to tanks HC-1 and HC-2:

- (a) At all times, including periods of startup, shutdown, malfunction and excess emissions, the Permittee shall operate and maintain tanks HC-1 and HC-2, including the Fumetrol® mist suppressant and monitoring equipment, in a manner consistent with good air pollution control practices, consistent with the Operation and Maintenance Plan (OMP) required by Condition D.1.6.
- (b) Malfunctions and excess emissions shall be corrected as soon as practicable after their occurrence in accordance with the OMP required by Condition D.1.6.
- (c) These operation and maintenance requirements are enforceable independent of

emissions limitations or other requirements in this section.

- (d) Determination of whether acceptable operation and maintenance procedures are being used will be based on information available to IDEM, OAM, which may include, but is not limited to, monitoring results; review of the OMP, procedures, and records; and inspection of the source.
- (e) Based on the results of a determination made under paragraph (c) of this condition, IDEM, OAM may require that the Permittee make changes to the OMP required by Condition D.1.6. Revisions may be required if IDEM, OAM finds that the plan:
 - (1) Does not address a malfunction or period of excess emissions that has occurred;
 - (2) Fails to provide for the operation of tanks HC-1 and HC-2, the Fumetrol® mist suppressant and process monitoring equipment during a malfunction or period of excess emissions in a manner consistent with good air pollution control practices; or
 - (3) Does not provide adequate procedures for correcting malfunctioning process equipment, Fumetrol® mist suppressant, monitoring equipment or other causes of excess emissions as quickly as practicable.

D.1.5 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan (PMP), in accordance with Section B-Preventive Maintenance Plan, of this permit, is required for the tanks HC-1 and HC-2 and the Fumetrol® mist suppressant.

D.1.6 Operation and Maintenance Plan [40 CFR 63.342(f)(3)]

- (a) The Permittee shall prepare an Operation and Maintenance Plan (OMP) to be implemented no later than 90 days after the effective date of this permit. The OMP shall specify the operation and maintenance criteria for the tanks, the Fumetrol® mist suppressant and monitoring equipment and shall include the following elements:
 - (1) Manufacturers recommendations for maintenance of the monitoring equipment used to measure surface tension;
 - (2) A standardized checklist to document the operation and maintenance criteria for tanks HC-1 and HC-2, the Fumetrol® mist suppressant and the monitoring equipment.
 - (3) Procedures to be followed to ensure that equipment or process malfunctions due to poor maintenance or other preventable conditions or periods of excess emissions as indicated by monitoring data do not occur.
 - (4) A systematic procedure for identifying malfunctions and periods of excess emissions of tanks HC-1 and HC-2, the Fumetrol® mist suppressant and monitoring equipment; and for implementing corrective actions to address such malfunctions and periods of excess emissions.
- (b) The Permittee may use applicable standard operating procedures (SOP) manuals, Occupational Safety and Health Administration (OSHA) plans, or other existing plans such as the PMP required in Condition D.1.5, as the OMP, provided the alternative plans meet the above listed criteria in Condition D.1.6(a).
- (c) If the OMP fails to address or inadequately addresses an event that meets the

characteristics of a malfunction or period of excess emissions at the time the plan is initially developed, the Permittee shall revise the OMP within forty-five (45) days after such an event occurs. The revised plan shall include procedures for operating and maintaining tanks HC-1 and HC-2, the Fumetrol® mist suppressant and the monitoring equipment, during similar malfunction or period of excess emissions events, and a program for corrective action for such events.

- (d) If actions taken by the Permittee during periods of malfunction or period of excess emissions are inconsistent with the procedures specified in the OMP, the Permittee shall record the actions taken for that event and shall report by phone such actions within two (2) working days after commencing actions inconsistent with the plan. This report shall be followed by a letter within seven (7) working days after the end of the event, unless the Permittee makes alternative reporting arrangements, in advance, with IDEM, OAM.
- (e) The Permittee shall keep the written OMP on record after it is developed to be made available, upon request, by IDEM, OAM for the life of tanks HC-1 and HC-2 or until the tanks are no longer subject to the provisions of 40 CFR 63.340. In addition, if the OMP is revised, the Permittee shall keep previous versions of the OMPs on record to be made available for inspection, upon request by IDEM, OAM for a period of five (5) years after each revision to the plan.

Compliance Determination Requirements [326 IAC 2-1.1-11]

D.1.7 Performance Testing [326 IAC 2-1.1-11] [40 CFR 63.343(b)(2)] [40 CFR 63.7] [40 CFR 63.344]

- (a) A performance test demonstrating initial compliance for tanks HC-1 and HC-2 was performed on June 4, 1996.

During the initial performance test conducted on June 4, 1996, it was determined that the surface tension of the bath, using Method 306B, Appendix A of 40 CFR 63, was 24.3 dynes/cm for tank HC-1 and 30.4 dynes/cm for HC-2. The source has accepted a limit of 45 dynes/cm for each tank.

Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]

D.1.8 Monitoring to Demonstrate Continuous Compliance [326 IAC 2-6.1-5(a)(2)] [40 CFR 63.343(c)]

- (a) Pursuant to 40 CFR 63.343(c)(5)(ii) and (iii), when using a wetting agent in the electroplating bath to comply with the limits specified in Condition D.1.3, the Permittee shall monitor the surface tension of the electroplating baths. Operation of tanks HC-1 and HC-2 at a surface tension greater than 45 dynes/cm shall constitute noncompliance with the standards.
 - (1) The Permittee shall monitor the surface tension of the electroplating bath during tank operation according to the following schedule:
 - (A) The surface tension shall be measured once every 4 hours during operation of the tank with a stalagmometer or a tensiometer as specified in Method 306B, appendix A of this part.
 - (B) The time between monitoring can be increased if there have been no

exceedances. The surface tension shall be measured once every 4 hours of tank operation for the first 40 hours of tank operation after the compliance date. Once there are no exceedances during 40 hours of tank operation, surface tension measurement may be conducted once every 8 hours of tank operation. Once there are no exceedances during 40 hours of tank operation, surface tension measurement may be conducted once every 40 hours of tank operation on an ongoing basis, until an exceedance occurs. The minimum frequency of monitoring allowed by this subpart is once every 40 hours of tank operation.

(C) Once an exceedance occurs as indicated through surface tension monitoring, the original monitoring schedule of once every 4 hours must be resumed. A subsequent decrease in frequency shall follow the schedule laid out in paragraph (B) above. For example, if a Permittee had been monitoring a tank once every 40 hours and an exceedance occurs, subsequent monitoring would take place once every 4 hours of tank operation. Once an exceedance does not occur for 40 hours of tank operation, monitoring can occur once every 8 hours of tank operation. Once an exceedance does not occur for 40 hours of tank operation on this schedule, monitoring can occur once every 40 hours of tank operation.

(2) Once a bath solution is drained from tanks HC-1 and HC-2 and a new solution added, the original monitoring schedule of once every 4 hours must be resumed, with a decrease in monitoring frequency allowed following the procedures in paragraphs (B) and (C) above.

(3) The initial compliance test was performed on June 4, 1996. The test included the initial measurements referenced in paragraphs (A) and (B) immediately above. These measurements do not require repeating unless 1) an exceedance occurs as indicated through surface tension monitoring or 2) a bath solution is changed and a new solution is added.

(b) Tank operation or operating time is defined as that time when a part is in the tank and the rectifier is turned on. If the amount of time that no part is in the tank is fifteen minutes or longer, that time is not considered operating time. Likewise, if the amount of time between placing parts in the tank (i.e., when no part is in the tank) is less than fifteen minutes, that time between plating the two parts is considered operating time.

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

D.1.9 Record Keeping Requirements [40 CFR 63.346]

The Permittee shall maintain records to document compliance with Conditions D.1.3, D.1.4 and D.1.6 using the forms provided with this permit. These records shall be maintained in accordance with Section C - General Record Keeping Requirements of this permit and include a minimum of the following:

(a) Inspection records for the Fumetrol® mist suppressant system and monitoring equipment to document that the inspection and maintenance required by Conditions D.1.7 and D.1.8 have taken place. The record can take the form of a checklist and should identify the following:

(1) The device inspected;

(2) The date of inspection;

- (3) A brief description of the working condition of the device during the inspection, including any deficiencies found; and
- (4) Any actions taken to correct deficiencies found during the inspection, including the date(s) such actions were taken.
- (b) Records of all maintenance performed on tanks HC-1 and HC-2, the Fumetrol® mist suppressant and monitoring equipment.
- (c) Records of the occurrence, duration, and cause (if known) of each malfunction of tanks HC-1 and HC-2, the Fumetrol® mist suppressant and monitoring equipment.
- (d) Records of the occurrence, duration, and cause (if known) of each period of excess emissions of tanks HC-1 and HC-2, the Fumetrol® mist suppressant and monitoring equipment as indicated by monitoring data collected in accordance with this condition.
- (e) Records of actions taken during periods of malfunction or excess emissions when such actions are inconsistent with the OMP.
- (f) Other records, which may take the form of checklists, necessary to demonstrate consistency with the provisions of the OMP.
- (g) Test reports documenting results of all performance tests.
- (h) All measurements as may be necessary to determine the conditions of performance tests, including measurements necessary to determine compliance.
- (i) Records of monitoring data required by 40 CFR 63.343(c) that are used to demonstrate compliance with the standard including the date and time the data are collected.
- (j) The total process operating time, as defined in Condition D.1.8(b), of each tank, during the reporting period.
- (k) Records of the actual cumulative rectifier capacity of each hard chromium electroplating tank expended during each month of the reporting period, and the total capacity expended to date for a reporting period.
- (l) Records of the date and time that fume suppressants were added to the electroplating bath, and the amount and type of fume suppressants added.

D.1.10 Reporting Requirements [326 IAC 3-6-4(b)] [40 CFR 63.344(a), 63.345 and 63.347]

The notifications and reports required in this section shall be submitted to IDEM, OAM using the address specified in Section C - General Reporting Requirements.

(a) Notifications:

(1) Initial Notifications

The Permittee notified IDEM, OAM in writing on 9/24/95 that the source is subject to 40 CFR Part 63, Subpart N. The notification was submitted no later than one hundred eighty (180) days after the compliance date and contained the information listed in 40 CFR 63.347(c)(1).

- (2) A Notification of Compliance Status (NCS) is required each time that the facility becomes subject to the requirements of 40 CFR Part 63 Subpart N.
 - (A) The NCS shall be submitted to IDEM, OAM, and shall list, for each tank, the information identified in 40 CFR 63.347(e)(2).
 - (B) The NCS for tanks HC-1 and HC-2 was submitted to IDEM, OAM no later than forty-five (45) days following completion of the compliance demonstration pursuant to Section C - Performance Testing. The test was conducted on June 15, 1996. The NCS was submitted with the test report within this prescribed time period.
- (3) Notification of Construction or Reconstruction
Pursuant to 40 CFR 63.345(b)(1), the Permittee may not construct a new tank subject to 40 CFR 63, Subpart N (including non-affected tanks defined in 40 CFR 63.344(e)) without submitting a Notification of Construction or Reconstruction (NCR) to IDEM, OAM. In addition, the Permittee may not change, modify, or reconstruct tanks HC-1 and HC-2 without submitting a Notification of Construction or Reconstruction (NCR) to IDEM, OAM.
 - (A) The NCR shall contain the information identified in 40 CFR 63.345(b)(2) and (3).
 - (B) A change, modification, or reconstruction of this facility includes any change in the air pollution control techniques, the addition of add-on control devices, or the construction of duct work for the purpose of controlling both existing tanks and non-affected facilities by a common control technique or device **[i.e., the addition of duct work to the CMP system (if a CMP system is used to demonstrate compliance with the chromium emission limitation)]**.
 - (C) A complete application to construct new chromium electroplating or chromium anodizing tanks serves as this notification. Likewise, the complete application to modify or reconstruct tanks HC-1 and HC-2 serves as this notification.
 - (D) Pursuant to 326 IAC 2-1.1-2(a), permission must be received from IDEM, OAM before construction, modification, or reconstruction may commence.
- (b) Ongoing Compliance Status Report
The Permittee shall prepare summary reports to document the ongoing compliance status of tanks HC-1 and HC-2 using the Ongoing Compliance Status Report form provided with this permit. This report shall contain the information specified in 40 CFR 63.347(g)(3).

Because tanks HC-1 and HC-2 are located at site that is an area source of hazardous air pollutants (HAPs), the Ongoing Compliance Status Report shall be retained on site and made available to IDEM, OAM upon request.
 - (1) The Ongoing Compliance Status Report shall be completed according to the following schedule except as provided in paragraphs (c)(2).

- (A) The first report shall cover the period from the effective date of this permit to December 31 of the same year.
 - (B) Following the first year of reporting, the report shall be completed on a calendar year basis with the reporting period covering from January 1 to December 31.
- (2) If either of the following conditions are met, semiannual reports shall be prepared and submitted to IDEM, OAM:
 - (A) The total duration of excess emissions (as indicated by the monitoring data collected by the Permittee in accordance with 40 CFR 63.343(c)) is one percent (1%) or greater of the total operating time as defined in Condition D.1.8(b) for the reporting period; or
 - (B) The total duration of malfunctions of the add-on air pollution control device and monitoring equipment is five percent (5%) or greater of the total operating time as defined in Condition D.1.8(b).

Once the Permittee reports an exceedance as defined above, Ongoing Compliance Status Reports shall be submitted semiannually until a request to reduce reporting frequency in accordance with 40 CFR 63.347(g)(2) is approved.

- (3) IDEM, OAM may determine on a case-by-case basis that the summary report shall be completed more frequently and submitted, or that the annual report shall be submitted instead of being retained on site, if these measures are necessary to accurately assess the compliance status of the source.

SECTION D.2

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description

- (4) One (1) paint booth, identified as West paint booth, using dry filters with a 99% control efficiency for overspray control, and exhausting to stack 23;
 - (5) One (1) paint booth, identified as North paint booth, using dry filters with a 99% control efficiency for overspray control, and exhausting to stack 25;
 - (6) Welding operation; two (2) metal inert gas (MIG) stations, each with a maximum wire consumption rate of 6.3 pounds of wire per hour (lb wire/hr), one (1) tungsten inert gas (TIG) station, with a maximum wire consumption rate of 6.0 lb wire/hr, one (1) oxyacetylene flame cutter, with a maximum cutting rate of 6 inches per minute, and one (1) plasma cutter, with a maximum cutting rate of 10 inches per minute; and
 - (7) Three (3) pneumatic blasters identified as # 14, # 15 and # 16.
- (The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards

D.2.1 Particulate Matter (PM) [326 IAC 6-3]

- (a) Pursuant to 326 IAC 6-3-2 (Process Operations), particulate emissions from the two (2) paint booths (West paint booth and North paint booth) shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

- (b) Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from the welding operation not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.
- (c) Pursuant to 326 IAC 6-3-2 (Process Operations), particulate emissions from the pneumatic blasting operation shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

$$E = 4.10 (0.9)^{0.67} = 3.82 \text{ lbs PM/hr}$$

Therefore, the pneumatic blasting operation is limited to 3.82 lbs PM/hr

D.2.2 Volatile Organic Compounds (VOCs) [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the West paint booth and the North paint booth shall be limited to 3.5 pounds of VOCs per gallon of coating less water.

Solvent sprayed from application equipment during cleanup or color changes shall be directed

into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

Compliance Determination Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.2.3 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test any emissions unit by this permit. However, IDEM may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.2.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.2.4 Particulate Matter (PM)

The dry filters for PM control shall be in operation at all times when the two (2) paint booths (West paint booth and North paint booth) are in operation.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.2.5 Visible Emissions Notations

- (a) Daily visible emission notations of the paint booth stack exhausts shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.2.6 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the pneumatic blasting operation when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.2.7 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

SECTION D.3

Emissions unit OPERATION CONDITIONS

Emissions Unit Description

- (8) Miscellaneous combustion units consisting of various natural gas fired heaters and one (1) waste oil dryer; and
- (9) Degreasing operation.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Degreasing operations

Emission Limitations and Standards

D.3.1 Volatile Organic Compounds (VOC)

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the owner or operator shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.3.2 Volatile Organic Compounds (VOC)

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser emissions unit shall ensure that the following control equipment requirements are met:
 - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.

- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
 - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning emissions unit shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

**MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	Micro-Precision Textron
Address:	525 Berne Street, Berne, IN 46711
City:	Berne
Phone #:	(219) 589-2136
MSOP #:	001-11722-00003

I hereby certify that Micro-Precision Textron is ☒ still in operation.
☐ no longer in operation.

I hereby certify that Micro-Precision Textron is ☒ in compliance with the requirements of MSOP 001-11722-00003.
☐ not in compliance with the requirements of MSOP 001-11722-00003.

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR MANAGEMENT FAX NUMBER - 317 233-5967

**This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6
and to qualify for the exemption under 326 IAC 1-6-4.**

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: _____ PHONE NO. () _____
LOCATION: (CITY AND COUNTY) _____
PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ INSP: _____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____

DATE/TIME MALFUNCTION STARTED: ____/____/20____ AM / PM
ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE ____/____/20____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO₂, VOC, OTHER: _____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____
INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

MALFUNCTION REPORTED BY: _____ TITLE: _____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

*SEE PAGE 2

PAGE 1 OF 2

**Please note - This form should only be used to report malfunctions
applicable to Rule 326 IAC 1-6 and to qualify for**

the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

**PART 70 OPERATING PERMIT
CHROMIUM ELECTROPLATING NESHAP
ONGOING COMPLIANCE STATUS REPORT**
(Complete this form for each affected tank)

Source Name: Micro-Precision Textron
Source Address: 525 Berne Street, Berne, IN 46711
Mailing Address: 525 Berne Street, Berne, IN 46711
MSOP Permit No.: 001-11722-00003

Tank ID #: _____
Type of process: Hard
Monitoring Parameter:
Parameter Value:
Limits: Total chromium concentration may not exceed _____ mg/dscm

This form is to be used to report compliance for the Chromium Electroplating NESHAP only.
The frequency for completing this report may be altered by the IDEM, OAM, Compliance Branch.

Companies classified as a major source: submit this report no later than 30 days after the end of the reporting period.
Companies classified as an area source: complete this report no later than 30 days after the end of the reporting period,
and retain on site unless otherwise notified.

This form consists of 2 pages

Page 1 of 2

BEGINNING AND ENDING DATES OF THE REPORTING PERIOD:

TOTAL OPERATING TIME OF THE TANK DURING THE REPORTING PERIOD:

MAJOR AND AREA SOURCES: CHECK ONE

9 NO DEVIATIONS OF THE MONITORING PARAMETER ASSOCIATED WITH THIS TANK FROM THE COMPLIANT VALUE OR RANGE OF VALUES OCCURRED DURING THIS REPORTING PERIOD.

9 THE MONITORING PARAMETER DEVIATED FROM THE COMPLIANT VALUE OR RANGE OF VALUES DURING THIS REPORTING PERIOD (THUS INDICATING THE EMISSION LIMITATION MAY HAVE BEEN EXCEEDED, WHICH COULD RESULT IN MORE FREQUENT REPORTING).

AREA (I.E., NON-MAJOR) SOURCES OF HAP ONLY:

IF DEVIATIONS OCCURRED, LIST THE AMOUNT OF TANK OPERATING TIME EACH MONTH THAT MONITORING RECORDS SHOW THE MONITORING PARAMETER DEVIATED FROM THE COMPLIANT VALUE OR RANGE OF VALUES.

JAN	APR	JUL	OCT
FEB	MAY	AUG	NOV
MAR	JUN	SEP	DEC

HARD CHROME TANKS / MAXIMUM RECTIFIER CAPACITY LIMITED IN ACCORDANCE WITH 40 CFR 63.342(c)(2) ONLY:
LIST THE ACTUAL AMPERE-HOURS CONSUMED (BASED ON AN AMP-HR METER) BY THE INDIVIDUAL TANK.

JAN	APR	JUL	OCT
FEB	MAY	AUG	NOV
MAR	JUN	SEP	DEC

CHROMIUM ELECTROPLATING NESHAP ONGOING COMPLIANCE STATUS REPORT

ATTACH A SEPARATE PAGE IF NEEDED

Page 2 of 2

IF THE OPERATION AND MAINTENANCE PLAN REQUIRED BY 40 CFR 63.342 (f)(3) WAS NOT FOLLOWED, PROVIDE AN EXPLANATION OF THE REASONS FOR NOT FOLLOWING THE PLAN AND DESCRIBE THE ACTIONS TAKEN FOR THAT EVENT:

DESCRIBE ANY CHANGES IN TANKS, RECTIFIERS, CONTROL DEVICES, MONITORING, ETC. SINCE THE LAST STATUS REPORT:

ADDITIONAL COMMENTS:

ALL SOURCES: CHECK ONE

- 9 I CERTIFY THAT THE WORK PRACTICE STANDARDS IN 40 CFR 63.342(f) WERE FOLLOWED IN ACCORDANCE WITH THE OPERATION AND MAINTENANCE PLAN ON FILE; AND, THAT THE INFORMATION CONTAINED IN THIS REPORT IS ACCURATE AND TRUE TO THE BEST OF MY KNOWLEDGE.
- 9 THE WORK PRACTICE STANDARDS IN 40 CFR 63.342(f) WERE NOT FOLLOWED IN ACCORDANCE WITH THE OPERATION AND MAINTENANCE PLAN ON FILE, AS EXPLAINED ABOVE AND/OR ON ATTACHED.

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

**Indiana Department of Environmental Management
Office of Air Management**

Addendum to the
Technical Support Document for a Minor Source Operating Permit (MSOP)

Source Name: Micro-Precision Textron
Source Location: 525 Berne Street, Berne, Indiana 46711
SIC Code: 3471, 3569
County: Adams
Operation Permit No.: MSOP-001-11722-00003
Permit Reviewer: Nishat Hydari /EVP

On April 21, 2000, the Office of Air Management (OAM) had a notice published in the Decatur Daily Democrat, Decatur, Indiana, stating that Micro-Precision Textron had applied for a Minor Source Operating Permit (MSOP) to operate a Hard Chromium Electroplating manufacturing facility. The notice also stated that OAM proposed to issue a MSOP for this operation and provided information on how the public could review the proposed MSOP and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this MSOP should be issued as proposed.

On May 12, 2000, Robert L. Henricks, P.E. from GAI Consultants, Inc. submitted comments on behalf of Micro-Precision Operations, Inc. on the proposed MSOP. The summary of the comments and corresponding responses is as follows (**bolded** language has been added, the language with a ~~line~~ through it has been deleted):

Comment # 1

Section A, Source Summary, Part A.2 (I) and Section D.1 Emissions Unit Description: As documented on form PI30, revise the emission unit description of these parts to reflect the correct annual cumulative rectified capacity as follows: "One (1) Hard Chromium Electroplating Operation with a maximum cumulative rectifier capacity of ~~5,880,000~~ **11,760,000** Ampere-hours (A-hr) consisting..."

Response # 1

The following changes have been made to Section A, Source Summary, Part A.2(1) and Section D.1 Emissions Unit Description.

- (1) One (1) Hard Chromium Electroplating Operation with a maximum cumulative rectifier capacity of ~~5,880,000~~ **11,760,000** Ampere-hours (A-hr) consisting of:
 - (a) Two (2) hard chromium electroplating tanks, identified as HC-1 and HC-2, equipped with a fumitrol fume suppressant, and exhausting to one (1) stack, identified as 5;

SECTION D.1

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description

- (1) One (1) Hard Chromium Electroplating Operation with a maximum cumulative rectifier capacity of ~~5,880,000~~ **11,760,000** Ampere-hours (A-hr) consisting of:
- (a) Two (2) hard chromium electroplating tanks, identified as HC-1 and HC-2, equipped with a fumitrol fume suppressant, and exhausting to one (1) stack, identified as 5.
- (The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Comment # 2

Section A, Source Summary, Part A.2(4): The use rates in the application are an annual average for MIG and TIG units. The spreadsheets have been revised based on maximum unit capacities. To reflect this change this Part should be modified as follows: "Welding operation; two (2) metal inert gas (MIG) stations, each with a maximum wire consumption rate of **6.3** ~~0.75~~ pounds of wire per hour (lb wire/hr), one (1) tungsten inert gas (TIG) station, with a maximum wire consumption rate of **6.0** ~~0.65~~ lb wire/hr."

Response # 2

The following changes have been made to Section A, Source Summary, Part A.2(4) and Section D.2. The welding emission calculations have been revised to reflect the change in rate for the MIG and TIG units. The revised welding calculation sheet (Page 4 of 6 of TSD Addendum App A) is attached.

A.2 Emissions units and Pollution Control Equipment Summary

This stationary source is approved to operate the following emissions units and pollution control devices:

- (4) Welding operation; two (2) metal inert gas (MIG) stations, each with a maximum wire consumption rate of ~~0.75~~ **6.3** pounds of wire per hour (lb wire/hr), one (1) tungsten inert gas (TIG) station, with a maximum wire consumption rate of ~~0.65~~ **6.0** lb wire/hr, one (1) oxyacetylene flame cutter, with a maximum cutting rate of 6 inches per minute, and one (1) plasma cutter, with a maximum cutting rate of 10 inches per minute;

SECTION D.2

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description

- (4) Welding operation; two (2) metal inert gas (MIG) stations, each with a maximum wire consumption rate of ~~0.75~~ **6.3** pounds of wire per hour (lb wire/hr), one (1) tungsten inert gas (TIG) station, with a maximum wire consumption rate of ~~0.65~~ **6.0** lb wire/hr, one (1) oxyacetylene flame cutter, with a maximum cutting rate of 6 inches per minute, and one (1) plasma cutter, with a maximum cutting rate of 10 inches per minute; and

Comment # 3

Section A, Source Summary, Part A.2(5): A review of the facility reveals that three (3) pneumatic glass bead blasters exist at the plant. Enclosed is a revised site plan locating the three units. The spreadsheet documenting actual and potential emissions for these units remains unchanged as far as the emissions estimates. A corrected copy is enclosed documenting that there are three units. Therefore, part A.2(5) should be revised as follows: **Three (3) ~~Two (2)~~ pneumatic blasters identified as # 14, and # 15 & # 16;**

Response # 3

The following changes have been made to Section A.2(5) and Section D.2. The pneumatic blasting emission calculations have been revised to reflect the addition of one (1) more pneumatic blaster. The revised pneumatic blasting calculation sheet (Page 5 of 6 of TSD Addendum App A) is attached.

A.2 Emissions units and Pollution Control Equipment Summary

(5) ~~Two~~ **Three (23)** pneumatic blasters identified as # 14, and # 15 and # 16;

SECTION D.2

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description

(5) Two Three (23) pneumatic blasters identified as # 14; and # 15 and # 16.
--

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)
--

Comment # 4

Section A, Source Summary, Part A.2(8): The plant utilizes a sulfuric acid anodizing tank. The tank is maintained at a chilled temperature of 30 F. Enclosed is a spreadsheet provided estimated emissions. Add the following: **A.2 (8) One (1) sulfuric acid anodizing operation exhausting to stack 9;**

Section A, Source Summary, Part A.2 (9): The plant utilizes an electroless nickel-plating tank. The tank is maintained at a temperature of 190 F. Enclosed is a spreadsheet providing estimated emissions. Add the following: **A.2 (9) One (1) electroless nickel plating operation exhausting to stack 9;**

Response # 4

The following changes have been made to Section A.2 and Section D.1. Sections D.2 and D.3 have been renumbered accordingly.

A.2 Emissions units and Pollution Control Equipment Summary

This stationary source is approved to operate the following emissions units and pollution control devices:

- (1) One (1) Hard Chromium Electroplating Operation with a maximum cumulative rectifier capacity of ~~5,880,000~~ **11,760,000** Ampere-hours (A-hr) consisting of:
 - (a) Two (2) hard chromium electroplating tanks, identified as HC-1 and HC-2,

equipped with a fumitrol fume suppressant, and exhausting to one (1) stack, identified as 5;

- (2) One (1) sulfuric acid anodizing operation exhausting to stack 9;**
- (3) One (1) electroless nickel plating operation exhausting to stack 9;**
- (24) One (1) paint booth, identified as West paint booth, using dry filters with a 99% control efficiency for overspray control, and exhausting to stack 23;
- (35) One (1) paint booth, identified as North paint booth, using dry filters with a 99% control efficiency for overspray control, and exhausting to stack 25;
- (46) Welding operation; two (2) metal inert gas (MIG) stations, each with a maximum wire consumption rate of ~~0-75~~ **6.3** pounds of wire per hour (lb wire/hr), one (1) tungsten inert gas (TIG) station, with a maximum wire consumption rate of ~~0-65~~ **6.0** lb wire/hr, one (1) oxyacetylene flame cutter, with a maximum cutting rate of 6 inches per minute, and one (1) plasma cutter, with a maximum cutting rate of 10 inches per minute;
- (57) ~~Two~~ **Three (23)** pneumatic blasters identified as # 14, ~~and # 15 and # 16~~;
- (68) Miscellaneous combustion units consisting of various natural gas fired heaters and one (1) waste oil dryer; and
- (79) Degreasing operation.

SECTION D.1

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description

- (1) One (1) Hard Chromium Electroplating Operation with a maximum cumulative rectifier capacity of ~~5,880,000~~ **11,760,000** Ampere-hours (A-hr) consisting of:
 - (a) Two (2) hard chromium electroplating tanks, identified as HC-1 and HC-2, equipped with a fumitrol fume suppressant, and exhausting to one (1) stack, identified as 5-;
- (2) One (1) sulfuric acid anodizing operation exhausting to stack 9; and**
- (3) One (1) electroless nickel plating operation exhausting to stack 9.**

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

SECTION D.2

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description

- (24) One (1) paint booth, identified as West paint booth, using dry filters with a 99% control efficiency for overspray control, and exhausting to stack 23;
 - (35) One (1) paint booth, identified as North paint booth, using dry filters with a 99% control efficiency for overspray control, and exhausting to stack 25;
 - (46) Welding operation; two (2) metal inert gas (MIG) stations, each with a maximum wire consumption rate of ~~0.75~~ **6.3** pounds of wire per hour (lb wire/hr), one (1) tungsten inert gas (TIG) station, with a maximum wire consumption rate of ~~0.65~~ **6.0** lb wire/hr, one (1) oxyacetylene flame cutter, with a maximum cutting rate of 6 inches per minute, and one (1) plasma cutter, with a maximum cutting rate of 10 inches per minute; and
 - (57) ~~Two~~ **Three** (23) pneumatic blasters identified as # 14; ~~and # 15 and # 16.~~
- (The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

SECTION D.3

Emissions unit OPERATION CONDITIONS

Emissions Unit Description

- (68) Miscellaneous combustion units consisting of various natural gas fired heaters and one (1) waste oil dryer; and
 - (79) Degreasing operation.
- (The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Comment # 5

Section C.15, General Reporting Requirements: Please clarify the apparent disagreement between Part (a), which requires certification, and Part (d), which does not.

Response # 5

Section C.15(a) states that the quarterly compliance monitoring report shall be submitted and include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1). 326 IAC 2-1.1-1(1) states "authorized individual" means an individual responsible for the overall operation of one (1) or more manufacturing, production, or operating plants or a duly authorized representative of such person. For any specific agency, the term means either a ranking elected official, the chief executive officer, or a designated representative of such person having responsibility for the overall operations of a principal geographic unit of the agency.

Section C.15(d) states that any quarterly report that the source might need to submit to IDEM, OAM does not require certification by an "authorized individual" unless otherwise specified. The requirements for the Quarterly Compliance Monitoring Report, including certification, are included in C.15(a). No changes have been made to the permit as a result of this comment.

Comment # 6

Section D.1.3 (b): The hard chrome electroplating unit was installed in 1959-1960 and is "small" based on the definition appearing in 40 CFR 63.34(a) for units having a maximum cumulative potential rectifying capacity less than 60 million amp-hr/yr. Also, based on 40 CFR 63.342c(1)(ii), the emission limit is 0.030 mg/dscm (1.3×10^{-5} gr/dscf). To reflect these corrections this Part should be modified as follows: (b) The hard chromium electroplating tanks, identified as HC-1 and HC-2 above, are considered a **small** ~~large~~, existing hard chromium electroplating operation. During tank operation, the Permittee shall control chromium emissions discharged to the atmosphere from the tanks by not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed **0.030** ~~0.045~~ mg/dscm [**1.3×10^{-5}** ~~6.6×10^{-6}~~ gr/dscf].

Response # 6

The following changes have been made to Section D.1.3(b).

D.1.3 Chromium Emissions Limitation [40 CFR 63.342(c)] [40 CFR 63.343(a)(1)&(2)]

- (b) The hard chromium electroplating tanks, identified as HC-1 and HC-2 above, are considered a **small** ~~large~~, existing hard chromium electroplating operation. During tank operation, the Permittee shall control chromium emissions discharged to the atmosphere from the tanks by not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed ~~0.045~~ **0.03** mg/dscm [~~6.6×10^{-6}~~ **1.3×10^{-5}** gr/dscf].

Comment # 7

Section D.1.4(a): The fume control agent used is Fumetrol, a registered trademark chemical and as such should be capitalized and followed by the registered trademark symbol wherever this term is used in the permit.

Response # 7

The following changes have been made to the permit.

A.2 Emissions units and Pollution Control Equipment Summary

This stationary source is approved to operate the following emissions units and pollution control devices:

- (1) One (1) Hard Chromium Electroplating Operation with a maximum cumulative rectifier capacity of ~~5,880,000~~ **11,760,000** Ampere-hours (A-hr) consisting of:
- (a) Two (2) hard chromium electroplating tanks, identified as HC-1 and HC-2, equipped with a ~~fumitrol~~ **Fumetrol®** fume suppressant, and exhausting to one (1) stack, identified as 5;

SECTION D.1

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description

(1) One (1) Hard Chromium Electroplating Operation with a maximum cumulative rectifier capacity of ~~5,880,000~~ **11,760,000** Ampere-hours (A-hr) consisting of:

- (a) Two (2) hard chromium electroplating tanks, identified as HC-1 and HC-2, equipped with a ~~fumitrol~~ **Fumetrol**® fume suppressant, and exhausting to one (1) stack, identified as 5-;

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

D.1.4 Work Practice Standards [40 CFR 63.342(f)]

The following work practice standards apply to tanks HC-1 and HC-2:

- (a) At all times, including periods of startup, shutdown, malfunction and excess emissions, the Permittee shall operate and maintain tanks HC-1 and HC-2, including the ~~f~~**Fumetrol**® mist suppressant and monitoring equipment, in a manner consistent with good air pollution control practices, consistent with the Operation and Maintenance Plan (OMP) required by Condition D.1.6.
- (b) Malfunctions and excess emissions shall be corrected as soon as practicable after their occurrence in accordance with the OMP required by Condition D.1.6.
- (c) These operation and maintenance requirements are enforceable independent of emissions limitations or other requirements in this section.
- (d) Determination of whether acceptable operation and maintenance procedures are being used will be based on information available to IDEM, OAM, which may include, but is not limited to, monitoring results; review of the OMP, procedures, and records; and inspection of the source.
- (e) Based on the results of a determination made under paragraph (c) of this condition, IDEM, OAM may require that the Permittee make changes to the OMP required by Condition D.1.6. Revisions may be required if IDEM, OAM finds that the plan:
 - (1) Does not address a malfunction or period of excess emissions that has occurred;
 - (2) Fails to provide for the operation of tanks HC-1 and HC-2, the ~~f~~**Fumetrol**® mist suppressant and process monitoring equipment during a malfunction or period of excess emissions in a manner consistent with good air pollution control practices; or
 - (3) Does not provide adequate procedures for correcting malfunctioning process equipment, ~~f~~**Fumetrol**® mist suppressant, monitoring equipment or other causes of excess emissions as quickly as practicable.

D.1.5 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan (PMP), in accordance with Section B-Preventive Maintenance

Plan, of this permit, is required for the tanks HC-1 and HC-2 and the **fFumetrol®** mist suppressant.

D.1.6 Operation and Maintenance Plan [40 CFR 63.342(f)(3)]

- (a) The Permittee shall prepare an Operation and Maintenance Plan (OMP) to be implemented no later than the startup date of tanks HC-1 and HC-2. The OMP shall specify the operation and maintenance criteria for the tanks, the **fFumetrol®** mist suppressant and monitoring equipment and shall include the following elements:
 - (1) Manufacturers recommendations for maintenance of the monitoring equipment used to measure surface tension;
 - (2) A standardized checklist to document the operation and maintenance criteria for tanks HC-1 and HC-2, the **fFumetrol®** mist suppressant and the monitoring equipment.
 - (3) Procedures to be followed to ensure that equipment or process malfunctions due to poor maintenance or other preventable conditions or periods of excess emissions as indicated by monitoring data do not occur.
 - (4) A systematic procedure for identifying malfunctions and periods of excess emissions of tanks HC-1 and HC-2, the **fFumetrol®** mist suppressant and monitoring equipment; and for implementing corrective actions to address such malfunctions and periods of excess emissions.
- (b) The Permittee may use applicable standard operating procedures (SOP) manuals, Occupational Safety and Health Administration (OSHA) plans, or other existing plans such as the PMP required in Condition D.1.5, as the OMP, provided the alternative plans meet the above listed criteria in Condition D.1.6(a).
- (c) If the OMP fails to address or inadequately addresses an event that meets the characteristics of a malfunction or period of excess emissions at the time the plan is initially developed, the Permittee shall revise the OMP within forty-five (45) days after such an event occurs. The revised plan shall include procedures for operating and maintaining tanks HC-1 and HC-2, the **fFumetrol®** mist suppressant and the monitoring equipment, during similar malfunction or period of excess emissions events, and a program for corrective action for such events.

D.1.9 Record Keeping Requirements [40 CFR 63.346]

The Permittee shall maintain records to document compliance with Conditions D.1.3, D.1.4 and D.1.6 using the forms provided with this permit. These records shall be maintained in accordance with Section C - General Record Keeping Requirements of this permit and include a minimum of the following:

- (a) Inspection records for the **fFumetrol®** mist suppressant system and monitoring equipment to document that the inspection and maintenance required by Conditions D.1.7 and D.1.8 have taken place. The record can take the form of a checklist and should identify the following:
 - (1) The device inspected;

- (2) The date of inspection;
 - (3) A brief description of the working condition of the device during the inspection, including any deficiencies found; and
 - (4) Any actions taken to correct deficiencies found during the inspection, including the date(s) such actions were taken.
- (b) Records of all maintenance performed on tanks HC-1 and HC-2, the ~~f~~Fumetrol® mist suppressant and monitoring equipment.
 - (c) Records of the occurrence, duration, and cause (if known) of each malfunction of tanks HC-1 and HC-2, the ~~fumitrol~~ Fumetrol® mist suppressant and monitoring equipment.
 - (d) Records of the occurrence, duration, and cause (if known) of each period of excess emissions of tanks HC-1 and HC-2, the ~~fumitrol~~ Fumetrol® mist suppressant and monitoring equipment as indicated by monitoring data collected in accordance with this condition.
 - (e) Records of actions taken during periods of malfunction or excess emissions when such actions are inconsistent with the OMP.
 - (f) Other records, which may take the form of checklists, necessary to demonstrate consistency with the provisions of the OMP.
 - (g) Test reports documenting results of all performance tests.
 - (h) All measurements as may be necessary to determine the conditions of performance tests, including measurements necessary to determine compliance.
 - (i) Records of monitoring data required by 40 CFR 63.343(c) that are used to demonstrate compliance with the standard including the date and time the data are collected.
 - (j) The total process operating time, as defined in Condition D.1.8(b), of each tank, during the reporting period.
 - (k) Records of the actual cumulative rectifier capacity of each hard chromium electroplating tank expended during each month of the reporting period, and the total capacity expended to date for a reporting period.
 - (l) Records of the date and time that fume suppressants were added to the electroplating bath, and the amount and type of fume suppressants added.

Comment # 8

Section D.1.6(a): The tanks are existing. The implementation time of an O&M Plan should be revised: (a) The Permittee shall prepare an Operation and Maintenance Plan (OMP) to be implemented no later than **90 days after the effective date of this permit** ~~the startup date of tanks HC-1 and HC-2.~~

Response # 8

The following changes have been made to Section D.1.6(a).

D.1.6 Operation and Maintenance Plan [40 CFR 63.342(f)(3)]

- (a) The Permittee shall prepare an Operation and Maintenance Plan (OMP) to be implemented no later than **90 days after the effective date of this permit** ~~the startup date of tanks HC-1 and HC-2~~. The OMP shall specify the operation and maintenance criteria for the tanks, the fumetrol mist suppressant and monitoring equipment and shall include the following elements:

Comment # 9

Section D.1.7: In this or another section the surface tension limit should be included. As stated in the IDEM letter of 4/15/97, the applicant has accepted the applicable limitation of 40 CFR 343.(c)(5): 45 dynes/cm.

Response # 9

The following language has been added to Section D.1.7.

D.1.7 Performance Testing [326 IAC 2-1.1-11] [40 CFR 63.343(b)(2)] [40 CFR 63.7] [40 CFR 63.344]

- (a) A performance test demonstrating initial compliance for tanks HC-1 and HC-2 was performed on June 4, 1996.

During the initial performance test conducted on June 4, 1996, it was determined that the surface tension of the bath, using Method 306B, Appendix A of 40 CFR 63, was 24.3 dynes/cm for tank HC-1 and 30.4 dynes/cm for HC-2. **The source has accepted a limit of 45 dynes/cm for each tank.**

Comment # 10

Section D.1.8(a): The correct limit should be included since the applicant has accepted the limitation of 40 CFR 343.(c)(5): 45 dynes/cm. Also, the initial compliance test witnessed by IDEM representatives and the report submitted to IDEM included the testing as required in part (1)(A), (B) and (C). This testing should not be required to be repeated unless justified by an exceedance or change in bath solution. The permit should reflect that these initial tests have been conducted. This part should be modified as follows: (a) Pursuant to 40 CFR 63.343(c)(5)(ii) and (iii), when using a wetting agent in the electroplating bath to comply with the limits specified in Condition D.1.3, the Permittee shall monitor the surface tension of the electroplating baths. Operation of tanks HC-1 and HC-2 at a surface tension greater than **45 dynes/cm** ~~the value established during a performance test~~ shall constitute noncompliance with the standards.

Response # 10

The following changes have been made to Section D.1.8(a).

D.1.8 Monitoring to Demonstrate Continuous Compliance [326 IAC 2-6.1-5(a)(2)] [40 CFR 63.343(c)]

- (a) Pursuant to 40 CFR 63.343(c)(5)(ii) and (iii), when using a wetting agent in the electroplating bath to comply with the limits specified in Condition D.1.3, the Permittee shall monitor the surface tension of the electroplating baths. Operation of tanks HC-1 and HC-2 at a surface tension greater than ~~the value established during a performance test~~ **45 dynes/cm** shall constitute noncompliance with the standards.

Comment # 11

Section D.1.8(a)(3): A new subsection can be added to address the initial compliance test:
D.1.8(a)(3): The initial compliance test was performed on June 4, 1996. The test included the initial measurements referenced in paragraphs (A) and (B) immediately above. These measurements do not require repeating unless 1) an exceedance occurs as indicated through surface tension monitoring or 2) a bath solution is changed and a new solution is added.

Response # 11

The following language has been added to Section D.1.8(a)(3).

D.1.8 Monitoring to Demonstrate Continuous Compliance [326 IAC 2-6.1-5(a)(2)] [40 CFR 63.343(c)]

-

- (a) Pursuant to 40 CFR 63.343(c)(5)(ii) and (iii), when using a wetting agent in the electroplating bath to comply with the limits specified in Condition D.1.3, the Permittee shall monitor the surface tension of the electroplating baths. Operation of tanks HC-1 and HC-2 at a surface tension greater than the value established during a performance test shall constitute noncompliance with the standards.
- (1) The Permittee shall monitor the surface tension of the electroplating bath during tank operation according to the following schedule:
- (A) The surface tension shall be measured once every 4 hours during operation of the tank with a stalagmometer or a tensiometer as specified in Method 306B, appendix A of this part.
- (B) The time between monitoring can be increased if there have been no exceedances. The surface tension shall be measured once every 4 hours of tank operation for the first 40 hours of tank operation after the compliance date. Once there are no exceedances during 40 hours of tank operation, surface tension measurement may be conducted once every 8 hours of tank operation. Once there are no exceedances during 40 hours of tank operation, surface tension measurement may be conducted once every 40 hours of tank operation on an ongoing basis, until an exceedance occurs. The minimum frequency of monitoring allowed by this subpart is once every 40 hours of tank operation.
- (C) Once an exceedance occurs as indicated through surface tension monitoring, the original monitoring schedule of once every 4 hours must be resumed. A subsequent decrease in frequency shall follow the

schedule laid out in paragraph (B) above. For example, if a Permittee had been monitoring a tank once every 40 hours and an exceedance occurs, subsequent monitoring would take place once every 4 hours of tank operation. Once an exceedance does not occur for 40 hours of tank operation, monitoring can occur once every 8 hours of tank operation. Once an exceedance does not occur for 40 hours of tank operation on this schedule, monitoring can occur once every 40 hours of tank operation.

- (2) Once a bath solution is drained from tanks HC-1 and HC-2 and a new solution added, the original monitoring schedule of once every 4 hours must be resumed, with a decrease in monitoring frequency allowed following the procedures in paragraphs (B) and (C) above.
- (3) **The initial compliance test was performed on June 4, 1996. The test included the initial measurements referenced in paragraphs (A) and (B) immediately above. These measurements do not require repeating unless 1) an exceedance occurs as indicated through surface tension monitoring or 2) a bath solution is changed and a new solution is added.**

Comment # 12

Section D.1.10(a)(1): Again, this is an existing process unit and the permit language for new units should be modified. Revise this part as follows: The Permittee **notified** ~~shall notify~~ IDEM, OAM in writing on **9/24/95** that the source is subject to 40 CFR Part 63, Subpart N. The notification **was** ~~shall be~~ submitted no later than one hundred eighty (180) days after the compliance date and ~~shall~~ **contained** the information listed in 40 CFR 63.347(c)(1).

Response # 12

D.1.10 Reporting Requirements [326 IAC 3-6-4(b)] [40 CFR 63.344(a), 63.345 and 63.347]

The notifications and reports required in this section shall be submitted to IDEM, OAM using the address specified in Section C - General Reporting Requirements.

(a) Notifications:

- (1) Initial Notifications
The Permittee ~~shall notify~~ **notified** IDEM, OAM in writing on **9/24/95** that the source is subject to 40 CFR Part 63, Subpart N. The notification ~~shall be~~ **was** submitted no later than one hundred eighty (180) days after the compliance date and ~~shall~~ **contained** the information listed in 40 CFR 63.347(c)(1).

Comment # 13

Section D.1.10(a)(2)(B): Again, this is an existing process unit and the permit language for new

units should be modified. Revise this part as follows: The NCS for tanks HC-1 and HC-2 ~~was shall be~~ submitted to IDEM, OAM no later than forty-five (45) days following completion of the compliance demonstration pursuant to Section C - Performance Testing. **The test was conducted on June 15, 1996. The NCS was submitted with the test report within this prescribed time period.**

Response # 13

The following changes have been made to Section D.1.10(a)(2)(B).

D.1.10 Reporting Requirements [326 IAC 3-6-4(b)] [40 CFR 63.344(a), 63.345 and 63.347]

-
- (a) Notifications:
- (1) Initial Notifications
The Permittee shall notify IDEM, OAM in writing that the source is subject to 40 CFR Part 63, Subpart N. The notification shall be submitted no later than one hundred eighty (180) days after the compliance date and shall contain the information listed in 40 CFR 63.347(c)(1).
- (2) A Notification of Compliance Status (NCS) is required each time that the facility becomes subject to the requirements of 40 CFR Part 63 Subpart N.
- (A) The NCS shall be submitted to IDEM, OAM, and shall list, for each tank, the information identified in 40 CFR 63.347(e)(2).
- (B) The NCS for tanks HC-1 and HC-2 ~~shall be~~ **was** submitted to IDEM, OAM no later than forty-five (45) days following completion of the compliance demonstration pursuant to Section C - Performance Testing. **The test was conducted on June 15, 1996. The NCS was submitted with the test report within this prescribed time period.**

Comment # 14

Section D.1.10(b)(1)(A): Again, this is an existing process unit and the permit language for new units should be modified. Revise this part as follows: The first report shall cover the period from the **effective date of this permit** ~~start up date of the emissions units~~ to December 31 of **the same year** ~~this year in which the emissions units begin operation~~.

Response # 14

The following changes have been made to Section D.1.10(b)(1)(A).

D.1.10 Reporting Requirements [326 IAC 3-6-4(b)] [40 CFR 63.344(a), 63.345 and 63.347]

- (b) Ongoing Compliance Status Report
The Permittee shall prepare summary reports to document the ongoing compliance status of tanks HC-1 and HC-2 using the Ongoing Compliance Status Report form provided with this permit. This report shall contain the information specified in 40 CFR 63.347(g)(3).
- Because tanks HC-1 and HC-2 are located at site that is an area source of hazardous air pollutants (HAPs), the Ongoing Compliance Status Report shall be retained on site and made available to IDEM, OAM upon request.
- (1) The Ongoing Compliance Status Report shall be completed according to the following schedule except as provided in paragraphs (c)(2).
- (A) The first report shall cover the period from the ~~start-up date of the emissions units~~ **effective date of this permit** to December 31 of ~~this year in which the emissions units begin operation~~ **the same year**.

Comment # 15

Section D.2.1(a): The rule should be correctly stated and the allowed limit should be included. An emission spreadsheet has been provided that documents potential PM paint/coating emissions. Revise as follows: Interpolation ~~and extrapolation~~ of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

$$E = 4.10 (146/2000)^{0.67} = 0.71 \text{ pounds per hour}$$

Therefore, the painting/coating operation is limited to 0.71 lbs PM/hr.

Response # 15

Complying with the requirements of 326 IAC 6-3-2 can be especially variable for paint booths. The actual substrate being painted and the solids content of the paint being used can affect the process weight rate, the gallons or pounds of solids used, transfer efficiency, or other factors that directly affect actual, allowable, or potential emissions. While permit applications contain representative information regarding these factors, relying on this information as an ongoing demonstration of compliance is difficult if the factors are not themselves enforceable. The OAM does not believe that it would be generally advisable to include these factors as permit conditions, to make them enforceable or to presume that they are so fixed they define a source's potential emissions because either could severely limit a source's operational flexibility. Properly operating the air pollution controls that are already in place is generally adequate to demonstrate compliance with 326 IAC 6-3 in lieu of a stack test and also assures compliance with applicable rules limiting fugitive dust, opacity, and (when necessary) Potential to Emit. The OAM believes that checking the placement and integrity of the filters once a day is a very effective means of ensuring proper operation and ongoing compliance. The only change made to Section D.2.1(a) is the deletion of the word "extrapolation". No other changes have been made to Section

D.2.1(a) as a result of this comment.

D.2.1 Particulate Matter (PM) [326 IAC 6-3]

- (a) Pursuant to 326 IAC 6-3-2 (Process Operations), particulate emissions from the two (2) paint booths (West paint booth and North paint booth) shall be limited by the following:

Interpolation ~~and extrapolation~~ of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

Comment # 16

Section D.2.1(b): The rule should be correctly stated and the correct allowed limit and correct limit units should be included. Emission spreadsheets are provided that document potential PM welding emission. Revise as follows: Interpolation ~~and extrapolation~~ of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The limit for process weights less than 100 pounds per hour is 0.551 pounds per hour. Since the process weight is 31.2 pounds per hour, the allowable PM limit is 0.551 pounds per hour. $E = 4.10 (1.075E-3)^{0.67} = 0.04 \text{ lbs PM/hr}$

Therefore, the welding operation is limited to **0.551 0.04 lbs PM/ hour MMBtu**.

Response # 16

The following changes have been made to Section D.2.1(b).

D.2.1 Particulate Matter (PM) [326 IAC 6-3]

- ~~(b) Pursuant to 326 IAC 6-3-2 (Process Operations), particulate emissions from the welding operation shall be limited by the following:~~

~~Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:~~

$$~~E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}~~$$

$$~~E = 4.10 (1.075E-3)^{0.67} = 0.04 \text{ lbs PM/hr}~~$$

~~Therefore, the welding operation is limited to 0.04 lbs PM/MMBtu~~

- (b) Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from the welding operation not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.**

Comment # 17

Section D.2.1(c): The rule should be correctly stated and the allowed limit should be corrected. An emission spreadsheet has been provided that documents potential PM pneumatic blasting emissions. Revise as follows: Interpolation ~~and extrapolation~~ of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

$$E = 4.10 (1800/2000)^{0.67} = 3.82 \text{ pounds per hour}$$

$$E = 4.10 (9.13E-4)^{0.67} = 0.04 \text{ lbs PM/hr}$$

Therefore, the pneumatic blasting operation is limited to **3.82** ~~0.04~~ lbs PM/hr

Response # 17

The maximum process weight rate for each pneumatic blaster is 600 lbs/hr. Therefore, the total maximum process weight rate for the three pneumatic blasters is 1800 lbs/hr or 0.9 tons/hr. The following changes have been made to Section D.2.1(c).

D.2.1 Particulate Matter (PM) [326 IAC 6-3]

- (c) Pursuant to 326 IAC 6-3-2 (Process Operations), particulate emissions from the pneumatic blasting operation shall be limited by the following:

Interpolation ~~and extrapolation~~ of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

$$E = 4.10 (9.13E-4 \text{ } **0.9**)^{0.67} = 0.04 \text{ } **3.82** \text{ lbs PM/hr}$$

Therefore, the pneumatic blasting operation is limited to ~~0.04~~ **3.82** lbs PM/hr

Comment # 18

Section D.2.3: The intent of the wording is not clear. Revise as follows: The Permittee is not required to test **any** ~~this~~ emissions unit by this permit. However...

Response # 18

The following changes have been made to Section D.2.3.

D.2.3 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test ~~this~~ **any** emissions unit by this permit. However, IDEM may

require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.2.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Comment # 19

Section D.2.6: Again the use of a standard paragraph without adequate peer review requires correction. Revise as follows: An inspection shall be performed each calendar quarter of all bags controlling the **pneumatic blasting** ~~woodworking~~ operation when...

Response # 19

The following changes have been made to Section D.2.6.

D.2.6 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the ~~woodworking~~ **pneumatic blasting** operation when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

Comment # 20

Section D.3.1(b): The global change to replace the term facility with the term emissions unit has not been peer reviewed. Revise as follows to conform to the cited rule: Equip the cleaner with a **facility** ~~emissions unit~~ for draining cleaned parts;

Response # 20

The following changes have been made to Section D.3.1(b).

D.3.1 Volatile Organic Compounds (VOC)

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the owner or operator shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a ~~emissions unit~~ **facility** for draining cleaned parts;

Comment # 21

Section D.3.2(a)(2): The global change to replace the term facility with the term emissions unit has not been peer reviewed. Revise as follows to conform to the cited rule: Equip the degreaser with a **facility** ~~emissions unit~~ for draining cleaned articles. If the...

Response # 21

D.3.2 Volatile Organic Compounds (VOC)

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser emissions unit shall ensure that the following control equipment requirements are met:
- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
 - (2) Equip the degreaser with a ~~emissions unit~~ **facility** for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage ~~emissions unit~~ **facility** must be internal such that articles are enclosed under the cover while draining. The drainage ~~emissions unit~~ **facility** may be external for applications where an internal type cannot fit into the cleaning system.

The following revisions have been made to the Technical Support Document under the appropriate sections (**bolded** language has been added, the language with a ~~line~~ through it has been deleted). The OAM prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

- (1) One (1) Hard Chromium Electroplating Operation with a maximum cumulative rectifier capacity of ~~5,880,000~~ **11,760,000** Ampere-hours (A-hr) consisting of:
 - (a) Two (2) hard chromium electroplating tanks, identified as HC-1 and HC-2, equipped with a fumitrol fume suppressant, and exhausting to one (1) stack, identified as 5;
- (2) **One (1) sulfuric acid anodizing operation exhausting to stack 9;**
- (3) **One (1) electroless nickel plating operation exhausting to stack 9;**

- (24) One (1) paint booth, identified as West paint booth, using dry filters with a 99% control efficiency for overspray control, and exhausting to stack 23;
- (35) One (1) paint booth, identified as North paint booth, using dry filters with a 99% control efficiency for overspray control, and exhausting to stack 25;
- (46) Welding operation; two (2) metal inert gas (MIG) stations, each with a maximum wire consumption rate of ~~0.75~~ **6.3** pounds of wire per hour (lb wire/hr), one (1) tungsten inert gas (TIG) station, with a maximum wire consumption rate of ~~0.65~~ **6.0** lb wire/hr, one (1) oxyacetylene flame cutter, with a maximum cutting rate of 6 inches per minute, and one (1) plasma cutter, with a maximum cutting rate of 10 inches per minute;
- (57) ~~Two~~ **Three** (23) pneumatic blasters identified as # 14, ~~and # 15 and # 16~~;
- (68) Miscellaneous combustion units consisting of various natural gas fired heaters and one (1) waste oil dryer; and
- (79) Degreasing operation.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	57.24 85.02
PM-10	57.65 85.46
SO ₂	0.05
VOC	4.10
CO	6.49
NO _x	7.72

HAP's	Potential To Emit (tons/year)
Xylene	3.13
Toluene	1.10
Methanol	0.17
MEK	3.43
MIK	0.08
Ethylene Glycol	0.21

Glycol Ethers	0.39
Ethyl benzene	0.55
Manganese	0.03
Chromium compounds	Less than 10
TOTAL	Less than 25

Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	2.90 3.55
PM10	3.34 3.99
SO ₂	0.05
VOC	4.10
CO	6.49
NO _x	7.72
Single HAP	3.43
Combination HAPs	9.06 9.09

- (a) This existing source is **not** a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

State Rule Applicability - Individual Facilities

326 IAC 6-3-2 (Process Operations)

- (a) The particulate matter (PM) from the two (2) paint booths (West paint booth and North paint booth) shall be limited by the following:

Interpolation ~~and extrapolation~~ of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The dry filters shall be in operation at all times the paint booth is in operation, in order to comply with this limit.

- ~~(b) The particulate matter (PM) from the welding operation shall be limited by the following:~~

~~Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:~~

~~$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$~~

$$E = 4.10 (1.075E-3)^{0.67} = 0.04 \text{ lbs PM/hr}$$

Based on the above equation, particulate matter emissions from the welding operation shall be limited to 0.04 pounds per hour.

Compliance calculation:

$$(0.048 \text{ tons PM/yr}) * (\text{yr}/8,760 \text{ hrs}) * (2,000 \text{ lbs/ton}) = 0.01 \text{ lbs PM/hr}$$

Actual lbs PM/hr (0.01) is less than the allowable lbs PM/hr (0.04), therefore the welding operation will comply with the requirements of 326 IAC 6-3-2.

- (b) Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from the welding operation not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.
- (c) The particulate matter (PM) from the two (2) pneumatic blasters (# 14 and # 15) shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

$$E = 4.10 (9.13E-4 \text{ } 0.9)^{0.67} = 0.04 \text{ } 3.82 \text{ lbs PM/hr}$$

Based on the above equation, particulate matter emissions from the two three (2 3) pneumatic blasters (# 14, and # 15 and # 16) shall be limited to 0.04 pounds per hour.

Compliance calculation:

$$(54.86 \text{ } 82.29 \text{ tons PM/yr}) * (\text{yr}/8,760 \text{ hrs}) * (2,000 \text{ lbs/ton}) = 12.53 \text{ } 18.79 \text{ lbs PM/hr}$$

Controlled Compliance calculation:

$$(0.55 \text{ } 0.82 \text{ tons PM/yr}) * (\text{yr}/8,760 \text{ hrs}) * (2,000 \text{ lbs/ton}) = 3.14E-8 \text{ } 0.19 \text{ lbs PM/hr}$$

The two three (2 3) pneumatic blasters will comply with the requirements of 326 IAC 6-3-2 by using a cyclone and a baghouse.

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for a Minor Source Operating Permit

Source Background and Description

Source Name: Micro-Precision Textron
Source Location: 525 Berne Street, Berne, IN 46711
County: Adams
SIC Code: 3471, 3569
Operation Permit No.: MSOP-001-11722-00003
Permit Reviewer: Nishat Hydari / EVP

The Office of Air Management (OAM) has reviewed an application from Micro-Precision Textron relating to the operation of a Hard Chromium Electroplating manufacturing facility.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

- (1) One (1) Hard Chromium Electroplating Operation with a maximum cumulative rectifier capacity of 5,880,000 Ampere-hours (A-hr) consisting of:
 - (a) Two (2) hard chromium electroplating tanks, identified as HC-1 and HC-2, equipped with a fumitrol fume suppressant, and exhausting to one (1) stack, identified as 5;
- (2) One (1) paint booth, identified as West paint booth, using dry filters with a 99% control efficiency for overspray control, and exhausting to stack 23;
- (3) One (1) paint booth, identified as North paint booth, using dry filters with a 99% control efficiency for overspray control, and exhausting to stack 25;
- (4) Welding operation; two (2) metal inert gas (MIG) stations, each with a maximum wire consumption rate of 0.75 pounds of wire per hour (lb wire/hr), one (1) tungsten inert gas (TIG) station, with a maximum wire consumption rate of 0.65 lb wire/hr, one (1) oxyacetylene flame cutter, with a maximum cutting rate of 6 inches per minute, and one (1) plasma cutter, with a maximum cutting rate of 10 inches per minute;
- (5) Two (2) pneumatic blasters identified as # 14 and # 15;
- (6) Miscellaneous combustion units consisting of various natural gas fired heaters and one (1) waste oil dryer; and
- (7) Degreasing operation.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) Operation Permit 01-01-7-0046 issued on March 4, 1975;
- (b) Registration issued on May 29, 1992.

All conditions from previous approvals were incorporated into this permit.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
25	North Paint booth	33.0	2.8" x 2.8"	12000	72
23	West Paint booth	30.5	3.0" x 3.0"	15500	72
5	Chromium Electroplating	26	1.33	5000	72
9	Biosolv Degreasing	18.3	0.67	5000	120
24	Alkaline Cleaner	26.7	1.8' x 2.0'	2150	140

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on December 28, 1999.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A, pages 1 through 6).

Chromium emissions (Single HAP) from the biggest source in Indiana is less than (10) tons per year and Micro-Precision Textron is a much smaller source in comparison. So no calculations were necessary for this source because the emissions from this source will be less than ten (10) tons per year.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	57.21
PM-10	57.65
SO ₂	0.05
VOC	4.10
CO	6.49
NO _x	7.72

HAP's	Potential To Emit (tons/year)
Xylene	3.13
Toluene	1.10
Methanol	0.17
MEK	3.43
MIK	0.08
Ethylene Glycol	0.21
Glycol Ethers	0.39
Ethyl benzene	0.55
Chromium compounds	Less than 10
TOTAL	Less than 25

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.
- (b) This new source is subject to 326 IAC 20-8 but not subject to 326 IAC 2-5.5-1 (b)(2) (registration) because the source consists of only hard chromium (not decorative chromium) electroplating tanks and the source emits less than major source levels (see statement (a) above). Therefore, the source is subject to the provisions of 326 IAC 2-6.1-3(a).

Actual Emissions

No previous emission data has been received from the source.

Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

	Limited Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
Chromium Tank	0.0	0.0	0.0	0.0	0.0	0.0	<10.0
Total Emissions	0.0	0.0	0.0	0.0	0.0	0.0	<25.0

County Attainment Status

The source is located in Adams County.

Pollutant	Status
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Adams County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Adams County has been classified as attainment or unclassifiable for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	2.90
PM10	3.34
SO ₂	0.05
VOC	4.10
CO	6.49
NO _x	7.72
Single HAP	3.43
Combination HAPs	9.06

- (a) This existing source is **not** a major stationary source because no attainment regulated

pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons/year.

Although this source is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAPs), 326 IAC 14, (40 CFR 63, Subpart N), no Title V permit is required pursuant to 40 CFR 63.340(e).

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) Tanks HC-1 and HC-2 are subject to the National Emission Standards for Hazardous Air Pollutants, 326 IAC 14, (40 CFR 63, Subpart N, and 326 IAC 20-1-1). Pursuant to 40 CFR 63, Subpart N, and 326 IAC 20-1-1, the chromium electroplating operations are subject to the following conditions:
 - (1) Emission limitation:
The permittee shall comply with the requirements of this condition on and after the compliance date for the tanks.
 - (a) The hard chromium electroplating tanks, identified as HC-1 and HC-2 above are considered a large, existing hard chromium electroplating operation. During tank operation, the Permittee shall control chromium emissions discharged to the atmosphere from the tanks by not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed fifteen-thousandth milligrams of total chromium per dry standard cubic meter of ventilation air (0.015 mg/dscm) [equivalent to six and six-tenths times ten raised to the power of negative six grains of total chromium per dry standard cubic foot of ventilation air (6.6×10^{-6} gr/dscf)].
 - (2) Monitoring Requirements:
The surface tension of the chromium electroplating bath contained with the tank shall not exceed forty-five (45) dynes per centimeter at any time during the operation of the tank if a chemical fume suppressant containing a wetting agent is used to demonstrate compliance.

Each time that surface tension monitoring exceeds forty-five (45) dynes per centimeter, the frequency of monitoring must revert back to every four (4) hours of tank operation. After forty (40) hours of monitoring tank operation every four (4) hours with no exceedances, surface tension measurement may be conducted once every eight (8) hours of tank operation. Once there have been no exceedances during forty (40) hours of tank operation, surface tension measurement may be conducted once every forty (40) hours of tank operation on an ongoing basis, until an exceedance occurs.

An alternative emission limit of 0.01 milligram per day standard cubic meter

(mg/dscm) will be applicable if the chromium electroplating bath does not meet the limit above.

(3) Reporting Requirements:

A summary report shall be prepared to document the ongoing compliance status of the chromium electroplating operation. This report shall be completed annually, retained on site, and made available to IDEM upon request. If there are significant exceedance of chromium air emission limits (as defined in 40 CFR Part 63.347(h)(2)), then semiannual reports shall be submitted to:

Indiana Department of Environmental Management
Air Compliance Branch, Office of Air Management
Chromium Electroplating
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206

(4) The chromium electroplating operations shall be subject to the record keeping and reporting requirement as indicated in the chromium electroplating NESHAP.

- (c) The cold cleaner degreaser is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), Subpart T because it does not use any solvent containing methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride or chloroform.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Adams County and the potential to emit any criteria pollutant is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 6-3-2 (Process Operations)

- (a) The particulate matter (PM) from the two (2) paint booths (West paint booth and North paint booth) shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The dry filters shall be in operation at all times the paint booth is in operation, in order to comply with this limit.

- (b) The particulate matter (PM) from the welding operation shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

$$E = 4.10 (1.075\text{E-}3)^{0.67} = 0.04 \text{ lbs PM/hr}$$

Based on the above equation, particulate matter emissions from the welding operation shall be limited to 0.04 pounds per hour.

Compliance calculation:

$$(0.048 \text{ tons PM/yr}) * (\text{yr}/8,760 \text{ hrs}) * (2,000 \text{ lbs/ton}) = 0.01 \text{ lbs PM/hr}$$

Actual lbs PM/hr (0.01) is less than the allowable lbs PM/hr (0.04), therefore the welding operation will comply with the requirements of 326 IAC 6-3-2.

- (c) The particulate matter (PM) from the two (2) pneumatic blasters (# 14 and # 15) shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

$$E = 4.10 (9.13\text{E-}4)^{0.67} = 0.04 \text{ lbs PM/hr}$$

Based on the above equation, particulate matter emissions from the two (2) pneumatic blasters (# 14 and # 15) shall be limited to 0.04 pounds per hour.

Compliance calculation:

$$(54.86 \text{ tons PM/yr}) * (\text{yr}/8,760 \text{ hrs}) * (2,000 \text{ lbs/ton}) = 12.53 \text{ lbs PM/hr}$$

Controlled Compliance calculation:

$$(0.55 \text{ tons PM/yr}) * (\text{yr}/8,760 \text{ hrs}) * (2,000 \text{ lbs/ton}) = 3.14\text{E-}8 \text{ lbs PM/hr}$$

The two (2) pneumatic blasters will comply with the requirements of 326 IAC 6-3-2 by using a cyclone and a baghouse.

326 IAC 8-2-9 (Miscellaneous Metal Coating)

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the West paint booth and the North paint booth shall be limited to 3.5 pounds of VOCs per gallon of coating less water.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

326 IAC 8-3-2 (Cold Cleaner Operations)

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the owner or operator shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)

The degreaser is without a remote solvent reservoir, thus the following rules are applicable.

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:
 - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
 - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
 - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):

- (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

- (a) This source will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Clean Air Act Amendments.

Conclusion

The operation of this hard chromium electroplating manufacturing facility shall be subject to the conditions of the attached proposed **Minor Source Operating Permit 001-11722-00003**.

Appendix A: Emission Calculations
Abrasive Blasting - Confined

Page 5 of 6 TSD Addendum App A

Company Name: Micro-Precision Textron
Address City IN Zip: 525 Berne Street, Berne, IN 46711
CP: 001-11722
Pit ID: 001-00003
Reviewer: Nishat Hydar / EVP

Table 1 - Emission Factors for Abrasives

Abrasive	Emission Factor	
	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	

Table 2 - Density of Abrasives (lb/ft3)

Abrasive	Density (lb/ft3)
Al oxides	160
Sand	99
Steel	487

Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr)

Flow rate of Sand Through a Blasting Nozzle as a Function of Nozzle pressure and Internal Diameter

Internal diameter, in	Nozzle Pressure (psig)						
	30	40	50	60	70	80	90
1/8	28	35	42	49	55	63	70
3/16	65	80	94	107	122	135	149
1/4	109	138	168	195	221	255	280
5/16	205	247	292	354	377	420	462
3/8	285	355	417	477	540	600	657
7/16	385	472	560	645	755	820	905
1/2	503	615	725	835	945	1050	1160
5/8	820	990	1170	1336	1510	1680	1850
3/4	1140	1420	1670	1915	2160	2400	2630
1	2030	2460	2900	3340	3780	4200	4640

Calculations for pneumatic blaster #14 (heat transfer area)

Adjusting Flow Rates for Different Abrasives and Nozzle Diameters

Flow Rate (FR) = Abrasive flow rate (lb/hr) with internal nozzle diameter (ID)
FR1 = Sand flow rate (lb/hr) with internal nozzle diameter (ID1) From Table 3 =
D = Density of abrasive (lb/ft3) From Table 2 =
D1 = Density of sand (lb/ft3) =
ID = Actual nozzle internal diameter (in) =
ID1 = Nozzle internal diameter (in) from Table 3 =

420
150
99
0.31
0.3125

Flow Rate (FR) (lb/hr) = 626.223 per nozzle

Uncontrolled Emissions (E, lb/hr)

EF = emission factor (lb PM/ lb abrasive) From Table 1 =
FR = Flow Rate (lb/hr) =
w = fraction of time of wet blasting =
N = number of nozzles =

0.010
626.223
0
1

Uncontrolled Emissions =	6.26 lb/hr
	27.43 ton/yr
Controlled Emissions =	0.27 ton/yr

Calculations for pneumatic blaster #15 (bench dept.)

Adjusting Flow Rates for Different Abrasives and Nozzle Diameters

Flow Rate (FR) = Abrasive flow rate (lb/hr) with internal nozzle diameter (ID)
FR1 = Sand flow rate (lb/hr) with internal nozzle diameter (ID1) From Table 3 =
D = Density of abrasive (lb/ft3) From Table 2 =
D1 = Density of sand (lb/ft3) =
ID = Actual nozzle internal diameter (in) =
ID1 = Nozzle internal diameter (in) from Table 3 =

420
150
99
0.31
0.3125

Flow Rate (FR) (lb/hr) = 626.223 per nozzle

Uncontrolled Emissions (E, lb/hr)

EF = emission factor (lb PM/ lb abrasive) From Table 1 =
FR = Flow Rate (lb/hr) =
w = fraction of time of wet blasting =
N = number of nozzles =

0.010
626.223
0
1

Uncontrolled Emissions =	6.26 lb/hr
	27.43 ton/yr
Controlled Emissions =	0.27 ton/yr

Calculations for pneumatic blaster #16

Adjusting Flow Rates for Different Abrasives and Nozzle Diameters

Flow Rate (FR) = Abrasive flow rate (lb/hr) with internal nozzle diameter (ID)
FR1 = Sand flow rate (lb/hr) with internal nozzle diameter (ID1) From Table 3 =
D = Density of abrasive (lb/ft3) From Table 2 =
D1 = Density of sand (lb/ft3) =
ID = Actual nozzle internal diameter (in) =
ID1 = Nozzle internal diameter (in) from Table 3 =

420
150
99
0.31
0.3125

Flow Rate (FR) (lb/hr) = 626.223 per nozzle

Uncontrolled Emissions (E, lb/hr)

EF = emission factor (lb PM/ lb abrasive) From Table 1 =
FR = Flow Rate (lb/hr) =
w = fraction of time of wet blasting =
N = number of nozzles =

0.010
626.223
0
1

Uncontrolled Emissions =	6.26 lb/hr
	27.43 ton/yr
Controlled Emissions =	0.27 ton/yr
Total Uncontrolled Emissions =	82.29 ton/yr
Total Controlled Emissions =	0.82 ton/yr

METHODOLOGY

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)
Ton/yr = lb/hr X 8760 hr/yr X ton/2000 lbs
Flow Rate (FR) (lb/hr) = FR1 x (ID/ID1)2 x (D/D1)
E = EF x FR x (1-w/200) x N
w should be entered in as a whole number (if w is 50%, enter 50)

Appendix A: Emission Calculations
HAP Emission Calculations

Company Name: Micro-Precision Textron
Address City IN Zip: 525 Berne Street, Berne, IN 46711
CP#: 001-11722
Pit ID: 001-00003
Permit Reviewer: Nishat Hydari / EVP

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Weight % Toluene	Weight % Methanol	Weight % MEK	Weight % MIK	Weight % Ethylene Glycol	Weight % Glycol Ethers	Weight % Ethyl Benzene	Weight % Hexamethylene	Xylene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Methanol Emissions (ton/yr)	MEK Emissions (ton/yr)	MIK Emissions (ton/yr)	Ethylene Glycol Emissions (ton/yr)	Glycol Ethers Emissions (ton/yr)	Ethyl benzene Emissions (ton/yr)	Hexamethylene Emissions (ton/yr)
Black Lacquer	9.18	0.117188	1.00	3.00%	4.00%	0.00%	4.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.14	0.19	0.00	0.19	0.00	0.00	0.05	0.00	0.00
Tile Clad II enamel	10.47	0.117188	1.00	12.00%	0.00%	0.00%	0.00%	0.00%	4.00%	5.00%	2.00%	0.00%	0.64	0.00	0.00	0.00	0.00	0.21	0.27	0.11	0.00
Lacquer thinner	6.69	0.117188	1.00	5.00%	15.00%	5.00%	0.00%	0.00%	0.00%	4.00%	1.00%	0.00%	0.17	0.52	0.17	0.00	0.00	0.00	0.14	0.03	0.00
Tile clad II hardener	8.48	0.117188	1.00	16.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.00%	3.00%	0.00%	0.70	0.00	0.00	0.00	0.00	0.00	0.39	0.13	0.00
MEK solvent	6.68	0.117188	1.00	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	3.43	0.00	0.00	0.00	0.00	0.00
Valspar, base	10.24	0.117188	1.00	1.00%	1.00%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.05	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Grey epoxy primer	12.1	0.117188	1.00	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	0.00%	0.00%	0.06	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00
KEM 400 enamel	9.34	0.117188	1.00	35.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00
KEM 400 catalyst	8.37	0.117188	1.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.20%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flat black enamel	6.5	0.117188	1.00	0.00%	33.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
KEM KROMIC primer	12.75	0.117188	1.00	11.00%	3.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	0.00%	0.72	0.20	0.00	0.00	0.00	0.00	0.00	0.13	0.00
DTM Acrylic	9.88	0.117188	1.00	0.00%	0.00%	0.00%	0.00%	0.00%	4.00%	4.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.20	0.20	0.00	0.00
Xylol	7.17	0.117188	1.00	85.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.00%	0.00%	3.13	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00
Rotac Blue	7.88	0.117188	1.00	4.00%	8.00%	0.00%	6.00%	2.00%	0.00%	4.00%	0.00%	0.00%	0.16	0.32	0.00	0.24	0.08	0.00	0.16	0.00	0.00
Total State Potential Emissions*													3.13	1.10	0.17	3.43	0.08	0.21	0.39	0.55	0.00

*Since only one spray gun can be used at a time, the worst case of each single HAP will be used to determine potential emissions.

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

Appendix A: Emission Calculations
HAP Emission Calculations

Company Name: Micro-Precision Textron
Address City IN Zip: 525 Berne Street, Berne, IN 46711
CP#: 001-11722
Plt ID: 001-00003
Permit Reviewer: Nishat Hydari / EVP

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Weight % Toluene	Weight % Methanol	Weight % MEK	Weight % MIK	Weight % Ethylene Glycol	Weight % Glycol Ethers	Weight % Ethyl Benzene	Weight % Hexamethylene	Xylene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Methanol Emissions (ton/yr)	MEK Emissions (ton/yr)	MIK Emissions (ton/yr)	Ethylene Glycol Emissions (ton/yr)	Glycol Ethers Emissions (ton/yr)	Ethyl benzene Emissions (ton/yr)	Hexamethylene Emissions (ton/yr)
Black Lacquer	9.18	0.117188	1.00	3.00%	4.00%	0.00%	4.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.14	0.19	0.00	0.19	0.00	0.00	0.05	0.00	0.00
Tile Clad II enamel	10.47	0.117188	1.00	12.00%	0.00%	0.00%	0.00%	0.00%	4.00%	5.00%	2.00%	0.00%	0.64	0.00	0.00	0.00	0.00	0.21	0.27	0.11	0.00
Lacquer thinner	6.69	0.117188	1.00	5.00%	15.00%	5.00%	0.00%	0.00%	0.00%	4.00%	1.00%	0.00%	0.17	0.52	0.17	0.00	0.00	0.00	0.14	0.03	0.00
Tile clad II hardener	8.48	0.117188	1.00	16.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.00%	3.00%	0.00%	0.70	0.00	0.00	0.00	0.00	0.00	0.39	0.13	0.00
MEK solvent	6.68	0.117188	1.00	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	3.43	0.00	0.00	0.00	0.00	0.00
Valspar, base	10.24	0.117188	1.00	1.00%	1.00%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.05	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Grey epoxy primer	12.1	0.117188	1.00	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	0.00%	0.00%	0.06	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00
KEM 400 enamel	9.34	0.117188	1.00	35.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00
KEM 400 catalyst	8.37	0.117188	1.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.20%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flat black enamel	6.5	0.117188	1.00	0.00%	33.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
KEM KROMIC primer	12.75	0.117188	1.00	11.00%	3.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	0.00%	0.72	0.20	0.00	0.00	0.00	0.00	0.00	0.13	0.00
DTM Acrylic	9.88	0.117188	1.00	0.00%	0.00%	0.00%	0.00%	0.00%	4.00%	4.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.20	0.20	0.00	0.00
Xylol	7.17	0.117188	1.00	85.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.00%	0.00%	3.13	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00
Rotac Blue	7.88	0.117188	1.00	4.00%	8.00%	0.00%	6.00%	2.00%	0.00%	4.00%	0.00%	0.00%	0.16	0.32	0.00	0.24	0.08	0.00	0.16	0.00	0.00
Total State Potential Emissions*													3.13	1.10	0.17	3.43	0.08	0.21	0.39	0.55	0.00

*Since only one spray gun can be used at a time, the worst case of each single HAP will be used to determine potential emissions.

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Micro-Precision Textron
Address City IN Zip: 525 Berne Street, Berne, IN 46711
CP: 001-11722
Plt ID: 001-00003
Reviewer: Nishat Hydari / EVP

Heat Input Capacity*
MMBtu/hr

Potential Throughput
MMCF/yr

17.6

154.5

*Includes various natural gas fired heaters and one (1) waste oil dryer

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.15	0.59	0.05	7.72	0.42	6.49

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

Appendix A: Emission Calculations

Company Name: Micro-Precision Textron
Address City IN Zip: 525 Berne Street, Berne, IN 46711
CP: 001-11722
Plt ID: 001-00003
Reviewer: Nishat Hydari / EVP

Uncontrolled Potential Emissions (tons/year)					
Emissions Generating Activity					
Pollutant	Surface Coating Operation	Welding Operation	Pneumatic Blasting	Natural Gas Combustion	TOTAL
PM	1.60	0.98	82.29	0.15	85.02
PM10	1.60	0.98	82.29	0.59	85.46
SO2	0.00	0.00	0.00	0.05	0.05
NOx	0.00	0.00	0.00	7.72	7.72
VOC	3.68	0.00	0.00	0.42	4.10
CO	0.00	0.00	0.00	6.49	6.49
total HAPs	9.06	0.03	0.00	0.00	9.09
worst case single HAP	3.43	0.03	0.00	0.00	3.43
Total emissions based on rated capacity at 8,760 hours/year.					
Controlled Potential Emissions (tons/year)					
Emissions Generating Activity					
Pollutant	Surface Coating Operation	Welding Operation	Pneumatic Blasting	Natural Gas Combustion	TOTAL
PM	1.60	0.98	0.82	0.15	3.55
PM10	1.60	0.98	0.82	0.59	3.99
SO2	0.00	0.00	0.00	0.05	0.05
NOx	0.00	0.00	0.00	7.72	7.72
VOC	3.68	0.00	0.00	0.42	4.10
CO	0.00	0.00	0.00	6.49	6.49
total HAPs	9.06	0.03	0.00	0.00	9.09
worst case single HAP	3.43	0.03	0.00	0.00	3.43
Total emissions based on rated capacity at 8,760 hours/year, after control.					

Appendix A: Emission Calculations

Company Name: Micro-Precision Textron
Address City IN Zip: 525 Berne Street, Berne, IN 46711
CP: 001-11722
Plt ID: 001-00003
Reviewer: Nishat Hydari / EVP

Uncontrolled Potential Emissions (tons/year)					
Emissions Generating Activity					
Pollutant	Surface Coating Operation	Welding Operation	Pneumatic Blasting	Natural Gas Combustion	TOTAL
PM	1.60	0.98	82.29	0.15	85.02
PM10	1.60	0.98	82.29	0.59	85.46
SO2	0.00	0.00	0.00	0.05	0.05
NOx	0.00	0.00	0.00	7.72	7.72
VOC	3.68	0.00	0.00	0.42	4.10
CO	0.00	0.00	0.00	6.49	6.49
total HAPs	9.06	0.03	0.00	0.00	9.09
worst case single HAP	3.43	0.03	0.00	0.00	3.43
Total emissions based on rated capacity at 8,760 hours/year.					
Controlled Potential Emissions (tons/year)					
Emissions Generating Activity					
Pollutant	Surface Coating Operation	Welding Operation	Pneumatic Blasting	Natural Gas Combustion	TOTAL
PM	1.60	0.98	0.82	0.15	3.55
PM10	1.60	0.98	0.82	0.59	3.99
SO2	0.00	0.00	0.00	0.05	0.05
NOx	0.00	0.00	0.00	7.72	7.72
VOC	3.68	0.00	0.00	0.42	4.10
CO	0.00	0.00	0.00	6.49	6.49
total HAPs	9.06	0.03	0.00	0.00	9.09
worst case single HAP	3.43	0.03	0.00	0.00	3.43
Total emissions based on rated capacity at 8,760 hours/year, after control.					

**Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations**

Company Name: Micro-Precision Textron
Address City IN Zip: 525 Berne Street, Berne, IN 46711
CP: 001-11722
Plt ID: 001-00003
Reviewer: Nishat Hydari / EVP

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Black Lacquer	9.18	50.60%	0.0%	50.6%	0.0%	30.00%	0.117188	1.000	4.65	4.65	0.54	13.06	2.38	0.58	15.48	75%
Grey Primer	7.40	77.70%	0.0%	77.7%	0.0%	14.50%	0.117188	1.000	5.75	5.75	0.67	16.17	2.95	0.21	39.65	75%
Tile Clad II enamel	10.47	37.30%	0.1%	37.2%	0.2%	22.75%	0.117188	1.000	3.90	3.89	0.46	10.95	2.00	0.84	17.12	75%
Lacquer thinner	6.69	100.00%	0.0%	100.0%	0.0%	0.00%	0.117188	1.000	6.69	6.69	0.78	18.82	3.43	0.00	ERR	75%
Tile clad II hardener	8.48	47.10%	0.0%	47.1%	0.0%	45.10%	0.117188	1.000	3.99	3.99	0.47	11.23	2.05	0.58	8.86	75%
MEK solvent	6.68	100.00%	0.0%	100.0%	0.0%	0.00%	0.117188	1.000	6.68	6.68	0.78	18.79	3.43	0.00	ERR	75%
Valspar, base	10.24	36.88%	0.0%	36.9%	0.0%	63.12%	0.117188	1.000	3.78	3.78	0.44	10.62	1.94	0.83	5.98	75%
Safety yellow	8.62	43.00%	0.0%	43.0%	0.0%	39.81%	0.117188	1.000	3.71	3.71	0.43	10.42	1.90	0.63	9.31	75%
AUE-300	8.31	29.33%	0.0%	29.3%	0.0%	64.13%	0.117188	1.000	2.44	2.44	0.29	6.86	1.25	0.75	3.80	75%
AUE-301	8.75	30.04%	0.0%	30.0%	0.0%	62.90%	0.117188	1.000	2.63	2.63	0.31	7.39	1.35	0.79	4.18	75%
HSP-900	14.98	16.85%	0.0%	16.9%	0.0%	63.13%	0.117188	1.000	2.52	2.52	0.30	7.10	1.30	1.60	4.00	75%
HSP-901	8.85	25.00%	0.0%	25.0%	0.0%	70.10%	0.117188	1.000	2.21	2.21	0.26	6.22	1.14	0.85	3.16	75%
Grey epoxy primer	12.10	29.00%	0.0%	29.0%	0.0%	50.31%	0.117188	1.000	3.51	3.51	0.41	9.87	1.80	1.10	6.97	75%
KEM 400 enamel	9.34	50.70%	0.0%	50.7%	0.0%	31.14%	0.117188	1.000	4.74	4.74	0.55	13.32	2.43	0.59	15.21	75%
KEM 400 catalyst	8.37	55.20%	0.0%	55.2%	0.0%	38.30%	0.117188	1.000	4.62	4.62	0.54	12.99	2.37	0.48	12.06	75%
Flat black enamel	6.50	85.40%	0.0%	85.4%	0.0%	8.70%	0.117188	1.000	5.55	5.55	0.65	15.61	2.85	0.12	63.80	75%
KEM KROMIC primer	12.75	25.80%	0.0%	25.8%	0.0%	43.28%	0.117188	1.000	3.29	3.29	0.39	9.25	1.69	1.21	7.60	75%
DTM Acrylic	9.88	52.40%	44.2%	8.2%	0.0%	37.70%	0.117188	1.000	0.81	0.81	0.09	2.28	0.42	0.60	2.15	75%
Xylol	7.17	100.00%	0.0%	100.0%	0.0%	0.00%	0.117188	1.000	7.17	7.17	0.84	20.17	3.68	0.00	ERR	75%
Rotac Blue	7.88	64.90%	0.0%	64.9%	0.0%	12.20%	0.117188	1.000	5.11	5.11	0.60	14.38	2.62	0.35	41.92	75%
S-0578 thinner	6.73	100.00%	0.0%	100.0%	0.0%	0.00%	0.117188	1.000	6.73	6.73	0.79	18.93	3.45	0.00	ERR	75%

State Potential Emissions*	Add worst case coating to all solvents	0.84	20.17	3.68	1.60
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*Since only one spray gun can be used at a time, the worst case coating will be used to determine potential emissions.

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A: Welding and Thermal Cutting

Page 4 of 6 TSD Addendum App A

Company Name: Micro-Precision Textron
Address City IN Zip: 525 Berne Street, Berne, IN 46711
Permit No./Plt ID: 001-11722-00003
Reviewer: Nishat Hydari / EVP

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)		EMISSION FACTORS * (lb pollutant / lb electrode)				EMISSIONS (lb/hr)				TOTAL HAPS (lb/hr)
				PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
WELDING												
Metal Inert Gas (MIG)	2	6.3		0.0052	0.00032	1E-06	1.00E-06	0.066	0.0040068	0.000	0.0000126	0.004
Tungsten Inert Gas (TIG)	1	6		0.0052	0.00032	1E-06	1.00E-06	0.031	0.001908	0.000	6.00E-06	0.002
FLAME CUTTING	Number of Stations	Max. Metal Thickness Cut (in.)	Max. Metal Cutting Rate (in./minute)	EMISSION FACTORS (lb pollutant/1,000 inches cut, 1" thick)				EMISSIONS (lbs/hr)				TOTAL HAPS (lb/hr)
				PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
Oxyacetylene	1	0.5	6	0.1622	0.0005	0.0001	0.0003	0.029	0.000	0.000	0.000	0.000
Plasma	1	1	10	0.1622	0.0005	0.0001	0.0003	0.097	0.000	0.000	0.000	0.000
EMISSION TOTALS								PM = PM10	Mn	Ni	Cr	Total HAPs
Potential Emissions lbs/hr								0.22	0.01	0.00	0.00	0.01
Potential Emissions lbs/day								5.36	0.14	0.00	0.00	0.14
Potential Emissions tons/year								0.98	0.03	0.00	0.00	0.03

METHODOLOGY

*Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process column. Consult AP-42 or other reference for different electrode types.

Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)

Cutting emissions, lb/hr: (# of stations)(max. metal thickness, in.)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 1" thick)

Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day

Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/day x 1 ton/2,000 lbs.

Plasma cutting emission factors are from the American Welding Society study published in Sweden (March 1994).

Welding and other flame cutting emission factors are from an internal training session document.

See AP-42, Chapter 12.19 for additional emission factors for welding.